



AMERICAN METEOROLOGICAL SOCIETY

91st American Meteorological Society Annual Meeting

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3A.5: Improving communication using NWS local climate analysis tool

Tuesday, 25 January 2011: 9:30 AM

606 (Washington State Convention Center)

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The Local Climate Analysis Tool (LCAT) is evolving out of a need to support and enhance the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) field offices' ability to access, manipulate, and interpret local climate data and characterize climate variability and change impacts.

LCAT will enable NWS Regional Headquarters, Weather Forecast Offices, Weather Service Offices, and River Forecast Centers the ability to conduct regional and local climate studies using station and reanalysis gridded data and various statistical techniques for climate analysis. The analysis results will be used for climate services to guide local decision makers in weather and climate sensitive actions and to deliver information to the general public. LCAT will augment current climate reference materials with information pertinent to the local and regional levels as they apply to diverse variables appropriate to each locality. The LCAT outcomes will be useful for governmental, economic and business planning. NWS external partners and government agencies will benefit from the LCAT outputs that could be easily incorporated into their own analysis and/or delivery systems.

Field offices need standardized, scientifically sound methodology for local climate analysis (such as trend, composites, and principal statistical and time-series analysis) that is comprehensive, accessible, and efficient, with the potential to expand with growing NOAA Climate Services needs. The methodology for climate analyses is practiced by the NWS Climate Prediction Center (CPC), NOAA National Climatic Data Center, and NOAA Earth System Research Laboratory, as well as NWS field office staff. LCAT will extend this practice at the local level, allowing it to become both widespread and standardized, and thus improve NWS climate services capabilities.

LCAT focus is on the local scale (as opposed to national and global scales of CPC products). The LCAT will:

- Improve professional competency of local office staff and expertise in providing local information to their users - LCAT will improve quality of local climate services
- Ensure adequate local input to CPC products that depend on local information, such as the U.S. Drought Monitor - LCAT will allow improvement of CPC climate products
- Allow testing of local climate variables beyond temperature averages and precipitation totals, provided by CPC, such as climatology of tornadoes, flash floods, storminess, extreme weather events, etc. - LCAT will expand the suite of NWS climate products.

The LCAT development utilizes NWS Operations and Services Improvement Process (OSIP) to document the field and user requirements, develop solutions, and prioritize resources. OSIP is a five work-stage process separated by four gate reviews. LCAT is currently at work-stage three: Research Demonstration and Solution Analysis. Gate 1 and 2 reviews identified LCAT as a high strategic priority project with a very high operational need. The Integrated Working Team, consisting of NWS field representatives, assists in tool function design and identification of LCAT operational deployment support.

See more of: [Communication Technologies for Accessing and Distributing Climate, Weather, and Hydrologic Data, Forecasts, and Information Part I](#)

See more of: [27th Conference on Interactive Information Processing Systems \(IIPS\)](#)

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